

Other Developments

Park soundscapes protected in litigation

by David Jacob

The National Park Service strives to preserve and restore the natural quiet and sounds associated with the physical and biological resources of the national parks. Disturbances are evaluated against the environment of sound that exists in the absence of human-caused noise. In 2002, this policy was addressed in two significant court decisions that involved intrusions on natural “soundscapes” in national parks from aircraft.

The first, *Grand Canyon Trust v. Federal Aviation Administration*, dealt with the proposed replacement of an airport in St. George, Utah, with a new one to be located near Zion National Park. The U.S. Court of Appeals, District of Columbia Circuit, ruled that the Federal Aviation Administration (FAA) did not adequately address the cumulative effects of the new airport

in the environmental assessment and therefore failed to satisfy the National Environmental Policy Act. The court held that rather than analyzing only the increase in noise from the new airport over the existing one, the environmental assessment should have considered the total noise impact of the replacement airport on the park, including noise from other regional airports and human activities.

The second case, *U.S. Air Tour Association v. FAA*, involved overflights of Grand Canyon National Park. Pursuant to the Overflights Act, the National Park Service defined the term “substantial restoration of the natural quiet” as requiring that 50% of a park experience natural quiet for 75% of the day. The National Park Service interpreted “the day” to mean a 12-hour daylight period in which this thresh-

old was not to be exceeded; the FAA interpreted it to mean an average annual day, or the amount of noise per day averaged over an entire year. The same court as presided in the Grand Canyon Trust case remanded the issue to the FAA for further consideration, noting that the FAA’s interpretation appeared inconsistent with the NPS definition of the term and the underlying premise that aircraft should be regulated to enhance the experience of park visitors. The court also remanded the FAA’s methodology for projecting impacts because it excluded noise from aircraft other than park air tour aircraft. ■

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Ensuring acceptable risk for Mojave National Preserve springs

by Chuck Pettee



Unnamed spring, Providence Mountains, Mojave National Preserve, California.

After months of negotiation, an agreement was reached in 2002 between the U.S. Department of the Interior and Metropolitan Water District of Southern California to protect spring flows at Mojave National Preserve. At issue was the water district’s proposed Cadiz Ground Water Storage and Dry Year Supply Project for a desert basin near Mojave National Preserve.

The project would divert surplus Colorado River water and store it underground. During dry years both the stored water and groundwater would be withdrawn and sent to users in southern California. Groundwater withdrawals introduce the potential of altering flows at the preserve’s springs. The Department of the Interior’s approval of a right-of-way permit for the project hinged in part on preventing such impacts.

Using science to bring life back to the Everglades

NPS PHOTO



Bison statuette, awarded to winners of the Director's Awards for Natural Resource Stewardship.

Dr. Robert “Bob” Johnson was honored in 2002 with the Director’s Award for Natural Resource Stewardship. For 12 years Bob has been instrumental in protecting and restoring the resources at Everglades National Park. His leadership has proved invaluable

and his persistence worthwhile. Bob’s approach to problem solving using a science-based decision-making process aided in his success.

Once home to a free-flowing river that provided clean water from Lake Okeechobee to Florida Bay, the Everglades has

been in decline for a half century. A booming population, coupled with the agriculture industry, has altered natural water flow patterns and water quality, affecting birds, other wildlife, and vegetation, and has driven the natural environment to near collapse. The Comprehensive Everglades Restoration Project is a plan to restore the Everglades and is the largest and most complicated environmental project in the world. It calls for a series of ecologically sensitive improvements to water control systems, which will take place over more than 20 years. This project was authorized by the Water Resources Development Act of 2000, and the National Park Service helped in its creation.

Bob has been involved since the beginning, guiding the project by obtaining the necessary funding and personnel. He was

responsible for coordinating the technical and scientific input of NPS resource staff from the south Florida parks and for the development of simulation models for ecological and hydrological responses. He also helped to bring the science of Everglades restoration to multiple forums, including Native American tribes; state, local, and federal agencies; and nongovernmental organizations.

Overall, Bob’s achievements illustrate how science is essential in ecological restoration and protection. He is an indispensable leader of the Comprehensive Everglades Restoration Project, which, if successful, will be a model for wetland restoration projects worldwide. ■

After months of data analysis, the technical experts could not resolve differing opinions about the potential for impact. The stalemate was broken when the water district accepted the risk associated with the technical uncertainty and committed to operate the project to prevent interference with spring flows. The water district would get less water than planned if its assumptions were wrong. A Ground Water Monitoring and Management Plan was developed to ensure that protecting spring flow was undertaken in a cost-effective and technically adequate manner. The plan requires that pumping be monitored by a network of wells and that the monitoring system be managed to adapt to changing data needs. The intent is to develop models for forecasting the effects of pumping so that mitigation

occurs early enough to prevent future changes in spring flows. This is necessary because spring flow changes may not occur for decades after pumping, when it is too late for mitigation. ■

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NPS PHOTO BY BRUCE BADZIK



Anacapa Island restoration continues

by Carol DiSalvo

Black rats (*Rattus rattus*), an exotic species introduced to the California Channel Islands before 1940, were a serious threat to the islands' native species. The rats preyed on reptiles, amphibians, marine and terrestrial invertebrates, and the young and eggs of island-nesting seabirds. On Anacapa Island, part of Channel Islands National Park, these ravenous predators prevented two rare bird species, the Xantus's murrelet (*Synthliboramphus hypoleucus*) and ash storm-petrel (*Oceanodroma homochroa*), from nesting successfully.

The Anacapa Island Restoration Project is the effort of the National Park Service in conjunction with a partner, Island Conservation and Ecology Group, to restore the island's habitat for native species. In November 2002 the second phase of the project got under way with the application by helicopter of the rodenticide brodifacoum on middle and west Anacapa islets; the treatment was modeled on the successful baiting of rats on east Anacapa Island in 2001. The project was developed with public and environmental input through NEPA (National Environmental Policy Act), a planning process that evaluated several management options. As part of the process, the National Park Service applied for and received an exemption from the Environmental Protection Agency permitting use of the rodenticide on the park's natural areas.

Concern about the possible inadvertent poisoning of migratory birds, birds of prey, and native rodents prompted the National Park Service to implement a number of risk-reduction strategies. The project was designed around a specific biological window, November through

December, when bird activity is low and the rats are more willing to accept the bait because other food sources are less available. The National Park Service also live-trapped native mice and birds of prey before applying the rodenticide; these animals were released after the threat of poisoning passed. A deflector attached to the bait hopper (arrow in photo) increased precision of the bait application on the steep hillsides of the island. Project staff conducted intensive search and removal of rat carcasses for 13 days after the baiting, followed by less intensive searches. Bird and wildlife populations were also extensively monitored before and after the bait application to assess efficacy and any unwanted impacts of the treatment.

Monitoring indicates that east Anacapa Island apparently is free of black rats a year after treatment. Researchers found an intact Xantus's murrelet egg, which was notable because rat depredation of eggs had been repeatedly recorded in the past. Survival of juvenile lizards and salamanders on rat-free east Anacapa was double that on middle Anacapa. More than 150 native deer mice released on east Anacapa are breeding and their numbers had increased to approximately 1,000 by the end of the breeding season. Although years of monitoring will be required to determine if black rats have been eradicated on Anacapa Island, the project is already helping native species rebound from the crippling impacts of this voracious exotic species. ■

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Air quality improving in many parks

by Dee Morse

The National Park Service's August 2002 report, "Air Quality in the National Parks—Second Edition," summarizes the results of 10 years of air quality monitoring activities in 32 national parks. According to the report, air quality is improving or remaining stable in more than half of the parks monitored, but restoring clean air to parks will require continuing efforts.

From 1990 to 1999, 28 parks were monitored for visibility. The report indicates that 22 of those parks showed improving visibility conditions. Acid rain monitoring

to determine levels of sulfates and nitrates was conducted in 29 parks. Twenty-five parks showed a decrease in sulfate levels, while 14 showed a decrease in nitrate levels. Fourteen parks had lower levels of both sulfates and nitrates. Ground-level ozone concentrations were monitored at 32 parks. Results indicate that ozone levels improved in eight parks, but deteriorated in 16 parks.

More than 60 units in the National Park System are currently conducting monitoring activities to provide information on ozone levels, acid rain, and visibility im-

pairment in parks. Air pollution affects many parks, but air quality monitoring conducted over the past 20 years documents that, in most parks, air quality is better than standards set by the Environmental Protection Agency to protect public health and welfare.

The report is published online at <http://www2.nature.nps.gov/ard/pubs/aqnps.htm>. ■

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Legend

- Improving trend
- Degrading trend
- No change

AIR QUALITY SCORECARD FOR NATIONAL PARKS

